



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,973	03/19/2004	Tse-Hsiang Hsu	3722-0185PUS1	6496
2292	7590	06/08/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			TON, TRI T	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/803,973

Applicant(s)

HSU ET AL.

Examiner

Tri T. Ton

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

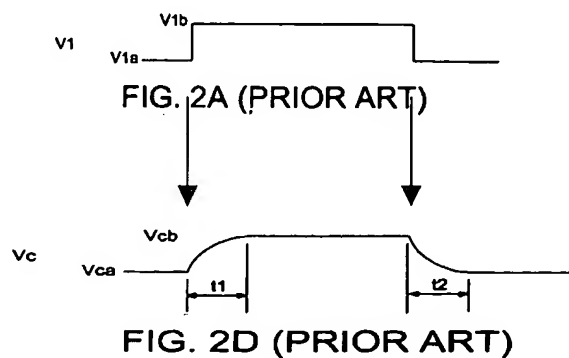
1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Oath/Declaration

2. The Oath and Declaration filed on 03/19/2004 is acceptable.

Drawings

3. New corrected drawing in compliance with 37 CFR 1.121(d) is required in this application because Figure 2D is not correct. The falling point of Vcb should start at the falling edge of V1b.



The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: incorrect statement.

As understood by examiner:

Page 9 lines 1-3, the following statement is incorrect: "the steady-state voltage of the comparison signal V2 is equal to the voltage of the reference signal V1". Due to the gain of the OP Amplifier 121, the steady-state voltage of the signal V2 that is Vout of the OP Amplifier cannot be equal to the voltage of the reference signal V1, that is Vin of the OP Amplifier 121.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

a. Specification, pages 7 lines 17 to 22 teaches "the object of using the gain-adjustable amplifier 41 in this automatic power controller 40 is to adjust its gain so as to maintain the same voltage across the capacitor C in the comparator 12 so as to reduce the occurrence of charging/discharging the capacitor C when the laser output power is changed to a different level. As a result, the time for the automatic power controller 40 to reach its new steady state is shortened while changing the laser output power." Moreover, Specification page 8 lines 20 to 23 and page 9, lines 1 to 4 teaches "the

invention utilizes the gain-adjustable 41 to amplify the output voltage (V2) of comparator 12 with proper gains for different laser power output, such that the steady-state voltage difference between the comparison signal V2 and the reference signal V1 are kept substantially unchanged, or in an even simpler way, the steady-state voltage of the comparison signal V2 is equal to the voltage of the reference signal V1, regardless the output power level of the laser light source." However, the specification does not adequately teaching why adjust the gain of the gain-adjustable amplifier can maintain the same voltage across the capacitor C.

As understood by examiner:

If change signal source voltage V1, the comparison signal output V2 from OP amp 121 will be changed (Figure 4), even when a gain-adjustable amplifier (Figure 4, element 41) is being used. Due to the gain of the OP amp 121, which depends on the value of registers R1 and R2, when signal source voltage V1 is changed, voltage across the capacitor in the comparator cannot maintain the same value. So, without maintaining the same voltage across the capacitor, how can said capacitor reduce the occurrence of charging/discharging?

The gain-adjustable amplifier (Figure 4, element 41) itself also includes an OP amp, and it may have its own a capacitor C'. Therefore, in the appearance of the gain-adjustable amplifier, the total occurrence of charging/discharging of the circuit is increased. Due to the clarity for the

invention, a simple implementation for the circuit of the gain-adjustable amplifier (Figure 4, element 41) should be provided.

b. Specification page 3 lines 15-18 teaches "to let control voltage signal to be fed to the drive unit 13 at the at the beginning of each laser light power changing progress. Therefore, the drive unit 13 may rapidly generate a correct drive signal to achieve the desired voltage signal to be fed to the drive unit." Moreover, Specification page 4, lines 11 to 13 teaches, "an object of the invention is to provide an automatic power controller capable of rapidly changing and stabilizing the output power of the laser light source." However, the specification does not adequately teaching why adding the gain of the gain-adjustable amplifier can rapidly generate a correct drive signal to achieve the desired voltage signal to be fed to the drive unit.

As understood by examiner:

Due to a delaying by the comparator C (Figure 4, element 12) and then by the gain-adjustable amplifier (Figure 4, element 41), the steady-state voltage of signal V4 to be fed to the drive unit (Figure 4, element 13) is prolonged. How can the drive unit rapidly generate a correct stable signal to achieve desired output power level of the laser light source?

c. According to the Specification, the purpose of the invention is looking for a practical implementation simpler (Spec page 4, line 8 –9). However, as understood by examiner on each change of the value of the power of the light source (Figure 4, element 15), a gain of the gain-adjustable

Art Unit: 2877

amplifier (Figure 4, element 41) must be calculated and changed. Therefore, a control unit is also needed to control the gain-adjustable. How can this design is simpler than the design of the previous art in Figure 3?

6. Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1 to 9 are rejected with the same reason as mentioned above.

7. *Due to problems under 35 USC 112, first paragraph above, the claimed invention is not searchable. The search will be conducted when the problems are clarified.*

Fax/Telephone Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri T. Ton whose telephone number is (571) 272-9064.

The examiner can normally be reached on 8:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2877

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tri Ton', with a horizontal line underneath.

May 12, 2006
Examiner Tri Ton/SN

A handwritten signature in black ink, appearing to read 'Hoa Pham', with a horizontal line underneath.

Hoa Pham
Primary Patent Examiner
Art Unit 2877
Technology Center 2800